

$$\int_{\exp(\exp(2))}^{\exp(\exp(1))} \frac{dx}{x \ln(x) \ln(\ln(x))} = \left[ \ln(\ln(\ln(x))) \right]_{\exp(\exp(2))}^{\exp(\exp(1))} \quad (1)$$

$$= \ln(\ln(e)) - \ln(\ln(e^2)) = \ln(1) - \ln(2) = -\ln(2).$$